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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 10/727,343 | 12/01/2003 | Toshio Yamamoto | 50053-00003 | 5268 |
| 7590 01/19/2006 Marsh Fischmann & Breyfogle LLP Suite 411 3151 South Vaughn Way Aurora, CO 80014 | | | EXAMINER TAMAI, KARL I | |
| | | | ART UNIT 2834 | PAPER NUMBER |

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,343

Applicant(s)

YAMAMOTO ET AL.

Examiner

Tamai I.E. Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1203</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I claims 1-8 and 25 in the reply filed on 11/14/2005 is acknowledged.

Inventorship

2. In view of the papers filed 10/17/2005, the inventorship in this nonprovisional application has been changed by the deletion of Yasuhide Ito and Yoshiki Nakano.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,

- the short-circuited segments are imaginarily overlaid on each other without circumferential displacement while maintaining the relative positions with the contacting brushes, the effective contacting width of the overlaid brushes along the circumferential direction of the commutator is greater than the circumferential width of the segments of claim 5;
- the short-circuited segments are imaginarily overlaid on each other without circumferential displacement while maintaining the relative positions with the contacting brushes, the effective contacting width of the overlaid brushes along the circumferential direction of the commutator is equal to or greater than the circumferential width of the segments of claim 6;
- the effective contacting widths are less than the circumferential width of the segments; and wherein, if the short-circuited segments are imaginarily overlaid on each other without circumferential displacement while maintaining the relative positions with the contacting brushes, the effective contacting width of the overlaid brushes along the circumferential direction of the commutator is less than the circumferential width of the segments of claim 7; and
- the short-circuited segments are imaginarily overlaid on each other without circumferential displacement while maintaining the relative positions with the contacting brushes, all the supply brushes of the same pole are within the effective contacting width of the supply brush of the same pole that has the greatest effective contacting width with respect to the circumferential direction of the commutator of claim 8.

must be shown or the feature canceled from the claims 5-8. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 5-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 5-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 5-8 are directed to imaginarily overlaying the commutator segments to determine the effective contact width of the brushes. These types of limitations are not disclosed by a written description or enabled by the specification.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The short-circuited segments imaginarily overlaid while maintaining the relative position of the contact brushes is unclear, further include the effective width of the brushes being greater, or less than, or within the effective contact width of the commutator segments is also unclear.

Claims 5-8 recite "if" limitations which do not positively recite structural claims limitations, no patentable weight has been given to the limitations.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cros et al. (Cros)(US 6891304) and Kao (US 5252599). Cros teaches a motor having excitation coils, a commutator with a plurality of segments, a plurality of supply brushes each having an anode and cathode contacting different segments, and short circuit lines (see figure 19) to simultaneously contact supply brushes of the same pole. Cros does not teach the poles supply brushes separating from the commutator segments at different times. Kao teaches the brushes having the same width as the commutator segment and pole leaving the segments at different times to provide a motor with reduce noise and vibration. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Cros with the brushes from the same pole leaving the segments at different times to reduce noise and vibration, as taught by Kao.

13. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cros et al. (Cros)(US 6891304) and Kao (US 5252599), in further view of Kanbe et al. (Kanbe)(JP 58215965). Cros and Kao teach every aspect of the invention except for the effective contact area being less than the commutator segment. Kanbe teaches the brushes having a smaller width than the commutator segments. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Cros and Kao with the brushes having an effective contact area less than the commutator segment to prevent irregular contact of the brushes with the commutator, as taught by Kanbe.

Allowable Subject Matter

14. Claim 25 is allowed.

15. Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl I Tamai
PRIMARY PATENT EXAMINER
January 18, 2006

KARL TAMAI
PRIMARY EXAMINER